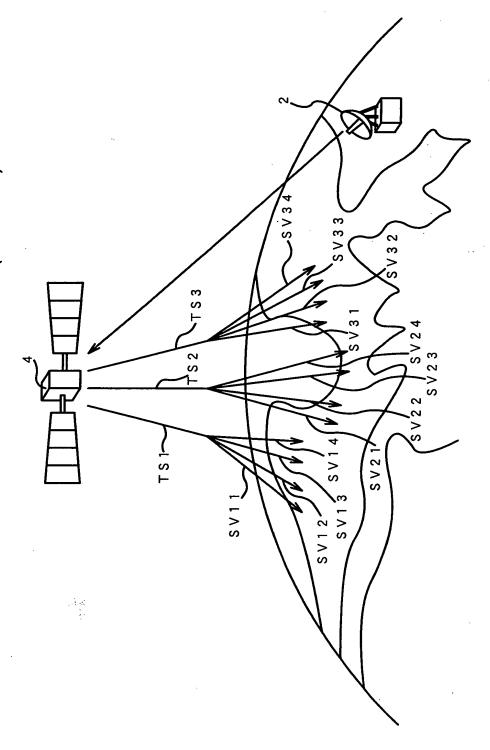
TRANSMISSION OF ELECTROMAGNETIC WAVES IN SATELLITE BROADCAST (DIAGRAM)



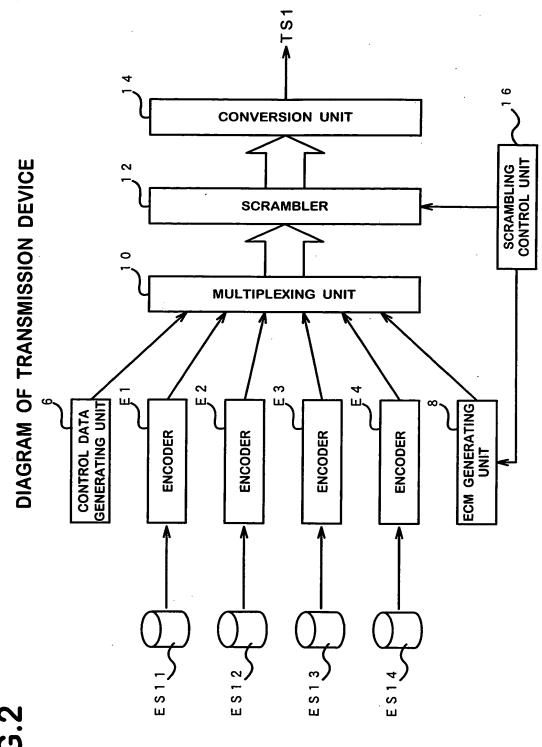
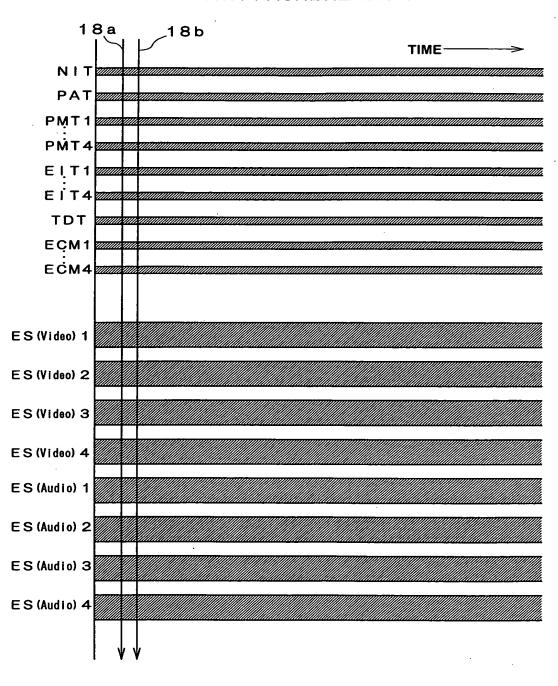


FIG.3

DATA PACKETIZATION



STRUCTURE OF PACKETIZED DATA

PID CONTENT DATA
· · · OOM/EM DATA

PMT1 (PID= 0×11)

VID	VIDEO		DIO
PID OF ECM	PID OF ES	PID OF ECM	PID OF ES
0×21	0×22	0×21	0×24

PAT $(PID=0\times00)$

SERVICE	PID OF PMT
SV11	0×0011
SV12	0×0012
SV13	0×0013
SV14	0×0014

PID	OF	NIT			
0×18					

NIT $(PID=0\times18)$

TS	TRANSMISSION PARAMETERS	SERVICE LIST
TS1	f 1 ····	SV11, SV12, SV13, SV14
TS2	f 2	SV21、SV22、SV23、SV24
1		

DIAGRAM OF RECEPTION DEVICE

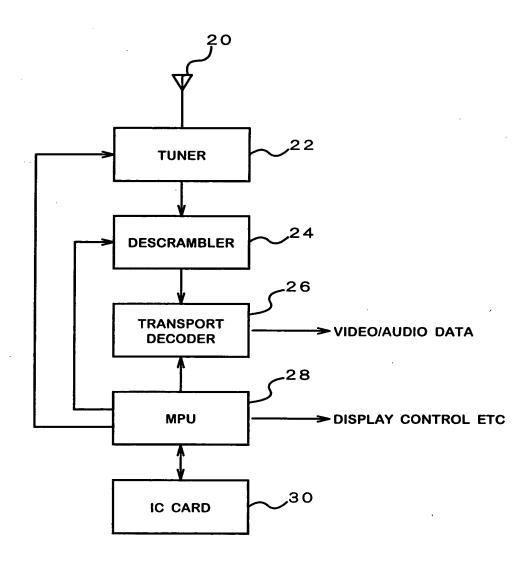


FIG.9



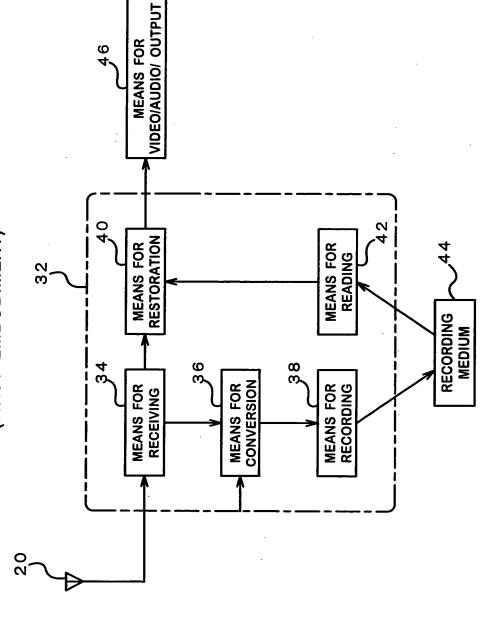


FIG.10 BLOCK DIAGRAM OF RECEPTION/RECODING/REPRODUCTION DEVICE

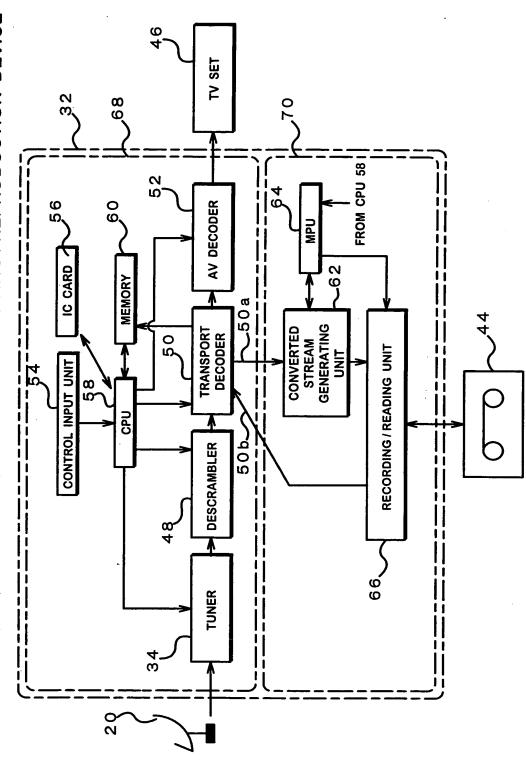
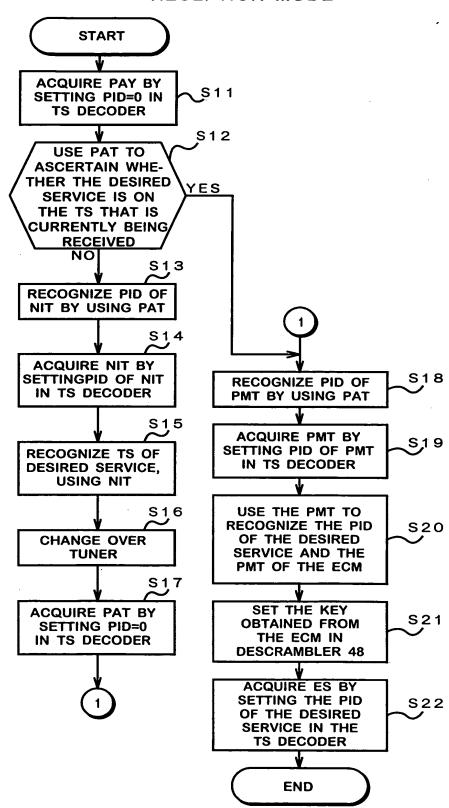
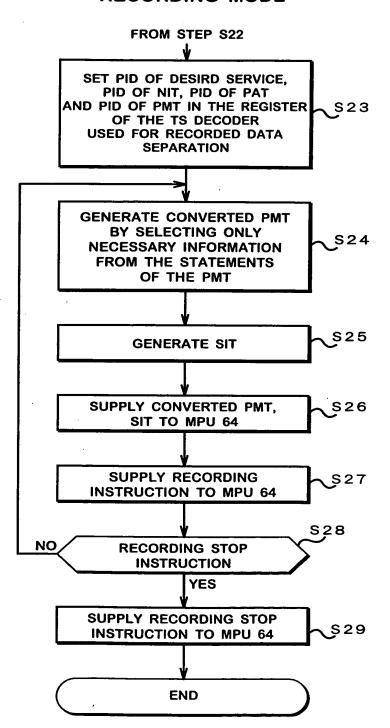


FIG.11

RECEPTION MODE



RECORDING MODE



CONVERTED STREAM RECORDED ON RECORDING MEDIUM

SIT	CONVERTED PAT	CONVERTED PMT	ES(V)	ES(V)	ES(V)	ES(A)	ES(A)	SIT	CONVERTED PAT	CONVERTED PMT		
-----	---------------	---------------	-------	-------	-------	-------	-------	-----	---------------	---------------	--	--

CONVERTED STREAM	D CONVERTED STREAM	<u> </u>
------------------	--------------------	----------

REPRODUCTION MODE

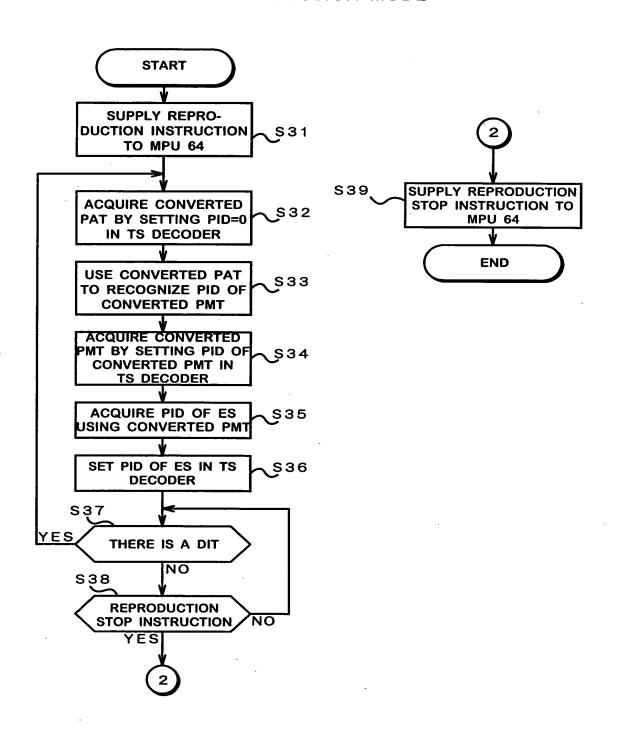
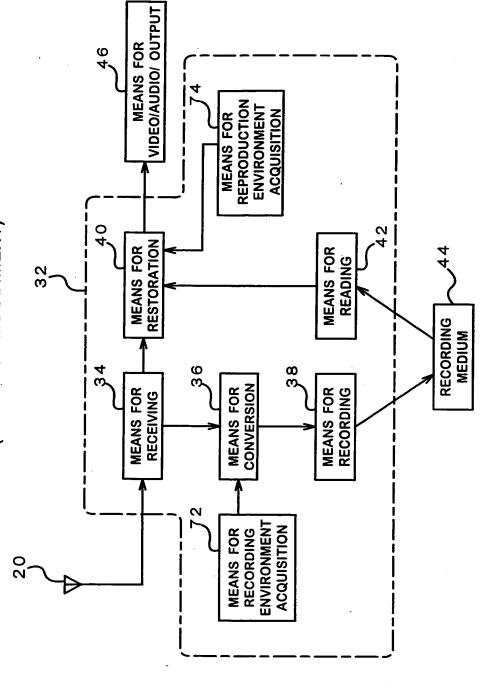
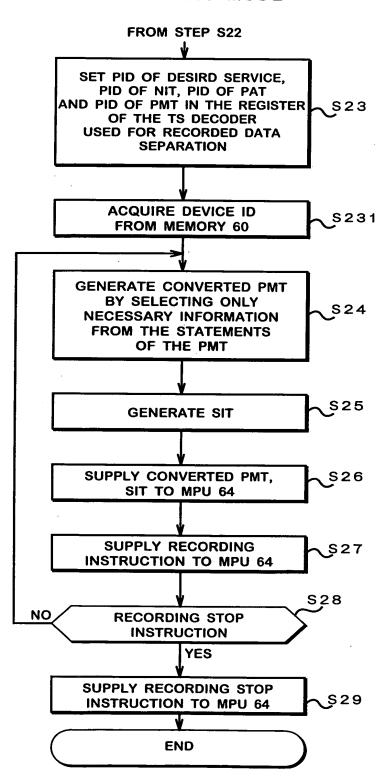


FIG.16

OVERALL LAYOUT DIAGRAM OF
RECEPTION/RECORDING/REPRODUCTION DEVICE
(SECOND EMBODIMENT)

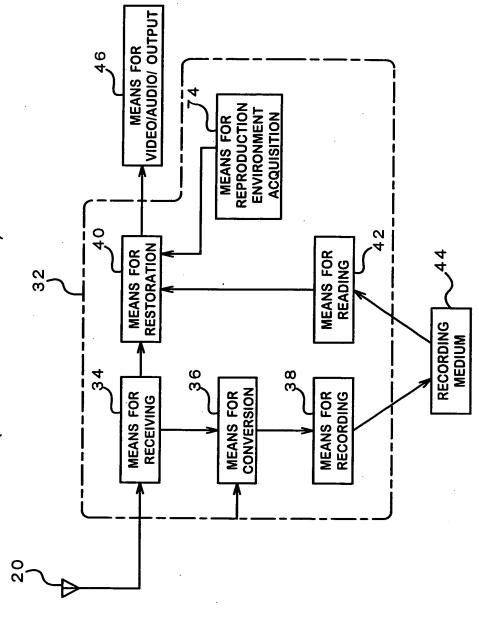


RECORDING MODE



REPRODUCTION MODE START SUPPLY REPRO-DUCTION INSTRUCTION S31 TO MPU 64 S39 SUPPLY REPRODUCTION **ACQUIRE CONVERTED** STOP INSTRUCTION TO S32 PAT BY SETTING PID=0 **MPU 64** IN TS DECODER **END USE CONVERTED PAT S33** TO RECOGNIZE PID OF RECOGNIZE PID OF THE S321 **CONVERTED PMT** SIT USING CONVERTED PAT ACQUIRE CONVERTED PMT BY SETTING PID OF **S34** ACQUIRE SIT BY SETTING CONVERTED PMT IN S322 PID OF SIT IN TS DECODER TS DECODER ACQUIRE PID OF ES **S35** JSING CONVERTED PMT ACQUIRE DEVICE ID S323 STATED IN SIT SET PID OF ES IN TS **S36 DECODER** READ ID OF THE DEVICE S324 **ITSELF FROM MEMORY 60** S37 S325 DOES THE DEVICE THERE IS A DIT NO **ID AGREE?** NO YES S38 REPRODUCTION INSTRÚCT AV STOP INSTRUCTION **DECODER 52 TO DIS-**YES PLAY A MESSAGE TO **S326** THE EFFECT THAT RE-PRODUCTION CANNOT **BE PERFORMED WITH** THIS DEVICE

OVERALL LAYOUT DIAGRAM OF RECEPTION/RECORDING/REPRODUCTION DEVICE (THIRD EMBODIMENT)



DATA PACKETIZATION

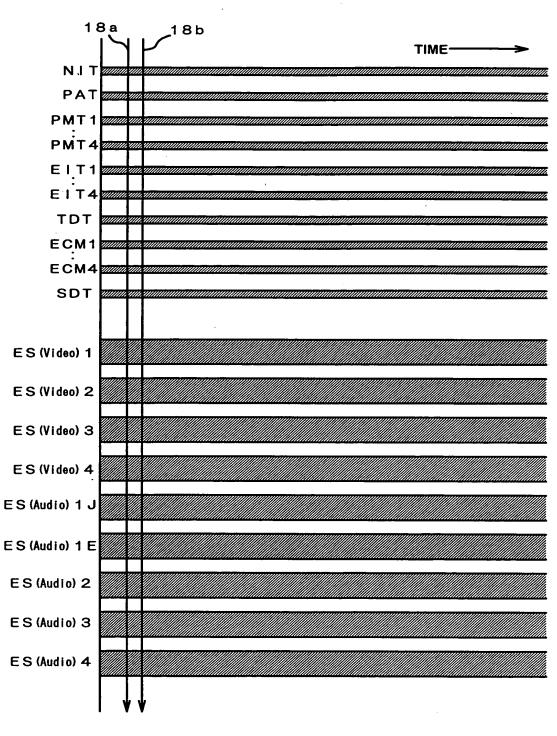
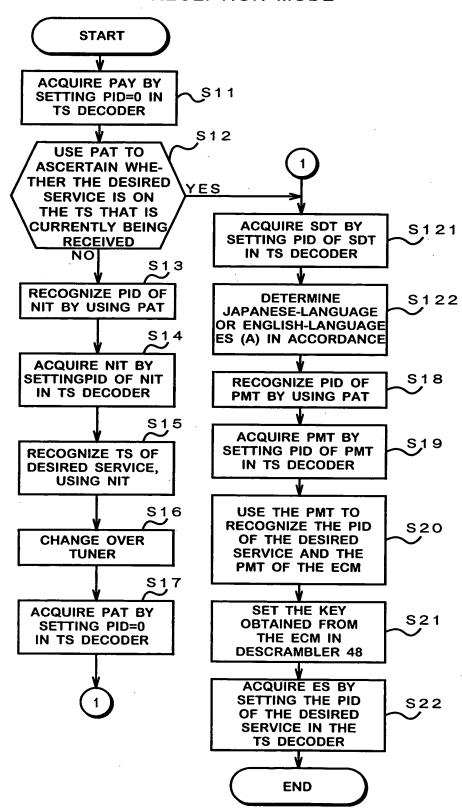


FIG.21

RECEPTION MODE



RECORDING MODE

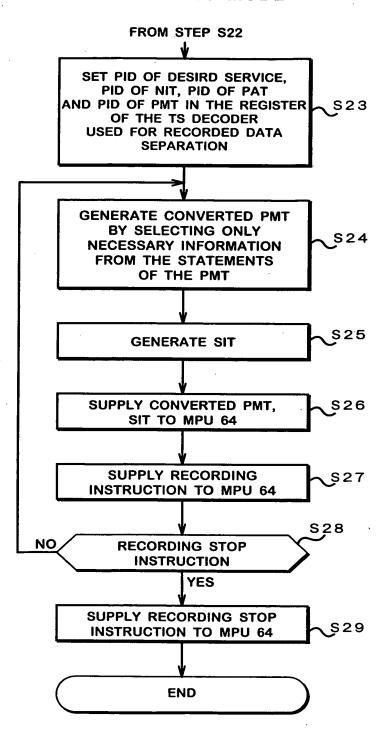
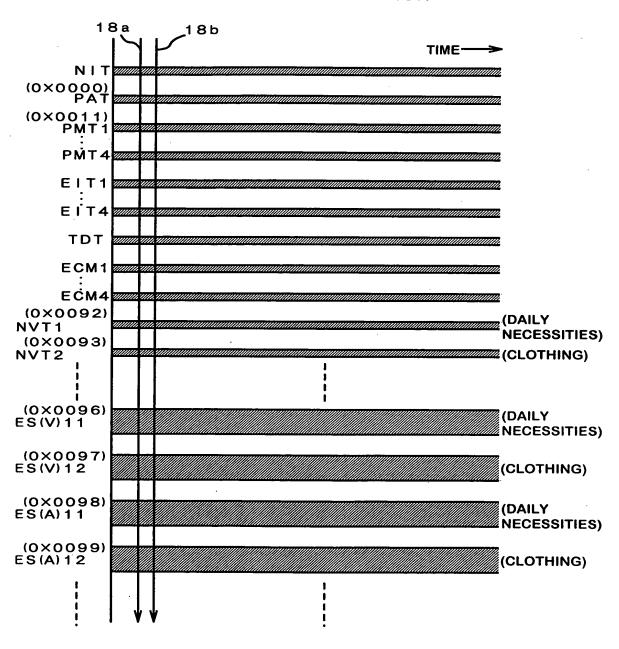


FIG.23

REPRODUCTION MODE **START** SUPPLY REPRO-DUCTION INSTRUCTION S31 TO MPU 64 **S39** SUPPLY REPRODUCTION ACQUIRE CONVERTED STOP INSTRUCTION TO S32 PAT BY SETTING PID=0 **MPU 64** IN TS DECODER **END USE CONVERTED PAT S33** TO RECOGNIZE PID OF RECOGNIZE PID OF THE S321 CONVERTED PMT SIT USING CONVERTED PAT ACQUIRE CONVERTED PMT BY SETTING PID OF **§34** ACQUIRE SIT BY SETTING CONVERTED PMT IN S322 PID OF SIT IN TS DECODER TS DECODER **ACQUIRE PID OF ES** S35 JSING CONVERTED PMT ACQUIRE PID OF **S327** JAPANESE-LANGUAGE ES (A) AND ENGLISH-SET PID OF ES IN TS LANĞÚAGE ES (A) STATED IN THE SIT **S36 DECODER S37** READ PLACE OF **INSTALLATION** S328 THERE IS A DIT INFORMATION OF THIS **DEVICE FROM MEMORY 60** NO S38 SELECT PID OF ES (A) OF REPRODUCTION LANGUAGE MATCHING OF S329 STOP INSTRUCTION / THE PLACE OF **INSTALLATION** YES

DATA PACKETIZATION



PMT1 $(PID=0\times0011)$

PACKET ID CORRESPONDENCE

	PID OF ES	PID OF ECM
VIDEO	0×0096	0×0082
	0×0097	0×0082
AUDIO	0×0098	0×0082
	0×0099	0×0082
NAVIGATION DATA	0×0092	0×0082
	0×0093	0×0082

ES (A) 11 ES (A) 12 NVT1

ES (V) 11

ES (V) 12

NVT2

ENTRY CONTENT

VIDEO	AUDIO	NAVIGATION DATA
0×0096	0×0098	0×0092

ES (V) 11 ES (A) 11 NVT1

PAT (PID=0×0000)

SERVICE	PID OF PMT
SV11	0×0011
SV12	0×0012
SV13	0×0013
SV14	0×0014

NAVIGATION DATA NVT1

OBJECT TABLE

Ξ[<u> </u>	<u> </u>
FOCUS	-	က	ည
NORMAL	0	2	4
HANDLER	0	1	2
Υ	200	400	009
×	200	200	500
INDEX TYPE	BUTTON 500 200	BUTTON 500400	BUTTON 500 600
INDEX	0	1	2

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INDEX	VIDEO	AUDIO	NAVIGATION DATA
0	9600×0	8600x09600x0	0×0092
1	7600X0	00000700000	8600X0

HANDLEK D	INDEX INSTRUCTION (SCRIPT)
0	
	send_string(index O, index 2)
₹	
	send_string(index 1, index 2)
2	goto_contents(index 1)

BITMAP TABLE INDEX

INDEX	DATA (BITMAP DATA)
 0	ORDER FROM OSAKA CENTER
1	ORDER FROM OSAKA CENTER
2	ORDER FROM TOKYO CENTER
3	ORDER FROM TOKYO CENTER
4	GO TO CLOTHING SHOP
2	GO TO CLOTHING SHOP

CHARACTER SEQUENCE TABLE

INDEX 1	INDEX CHARACTER SEQUENCE 0 06-6368-XXXX 1 03-1234-XXXX
1	一 ののです。山口つつ 一つつつつとし

NAVIGATION DATA NVT2

ı	L	

FOCUS	1	က	5
NORMAL CONDITION	0	2	4
HANDLER	0	1	2
Υ	200	400	009
×	200	200	500
TYPE	виттом 500/200	BUTTON 500 400	BUTTON 500 600
NDEX	0	1	2

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TAB	
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	AUDIO NAVIGATION DATA	0x0098 0x0092	8600×0 6600×0	
	VIDEO	8600×0 9600×0	0x00970x0099	
HIPER LINK TABLE	INDEX	0	-	

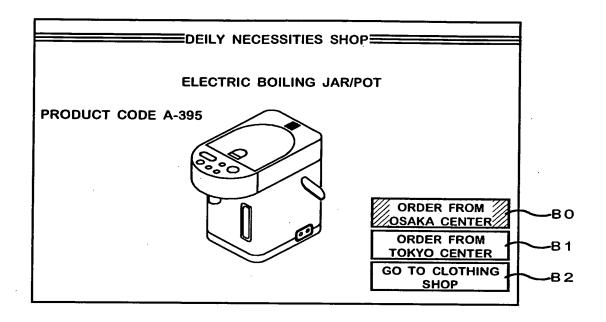
HANDLER DEFINITION TABLE

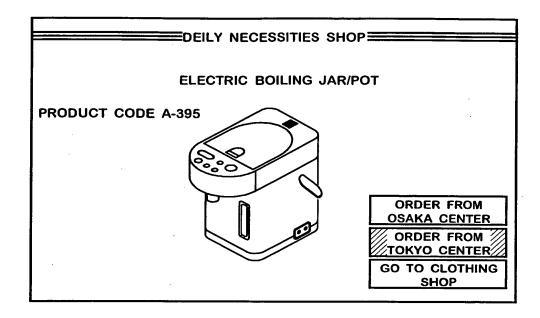
BITMAP TABLE INDEX

	INDEX	DATA (BITMAP DATA)
	0	ORDER FROM OSAKA CENTER
-	1	MORDER FROM OSAKA CENTER
	2	ORDER FROM TOKYO CENTER
	3	ORDER FROM TOKYO CENTER
	4	GO TO DAILY NECESSITIES SHOP
	5	GO TO DAILY NECESSITIES SHOP

CHARACTER SEQUENCE TABLE

	מייייייייייייייייייייייייייייייייייייי
INDEX	CHARACTER SEQUENCE
0	XXXX-89E9-90
1	03-1234-XXXX
2	PRODUCT CODE:B-133





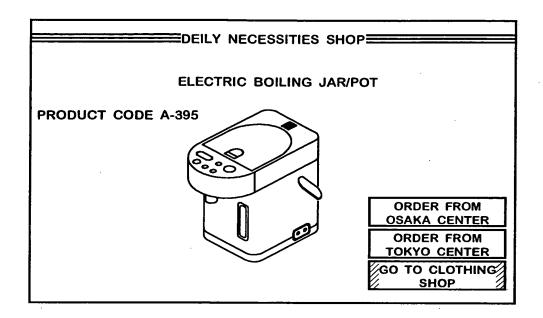


FIG.32

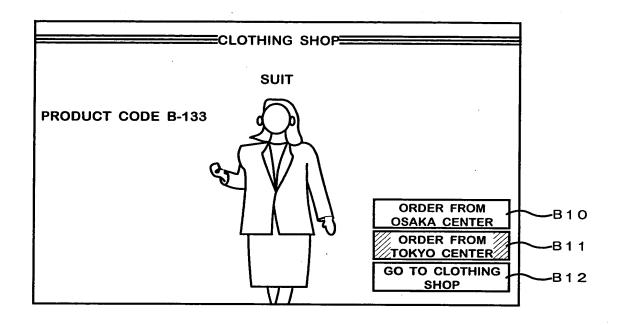


FIG.33



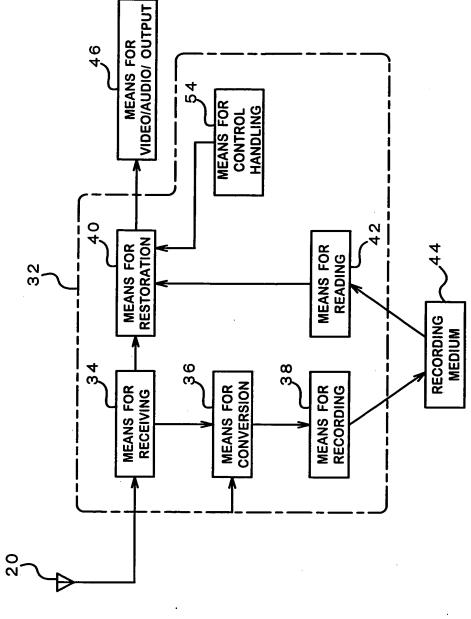


FIG.34

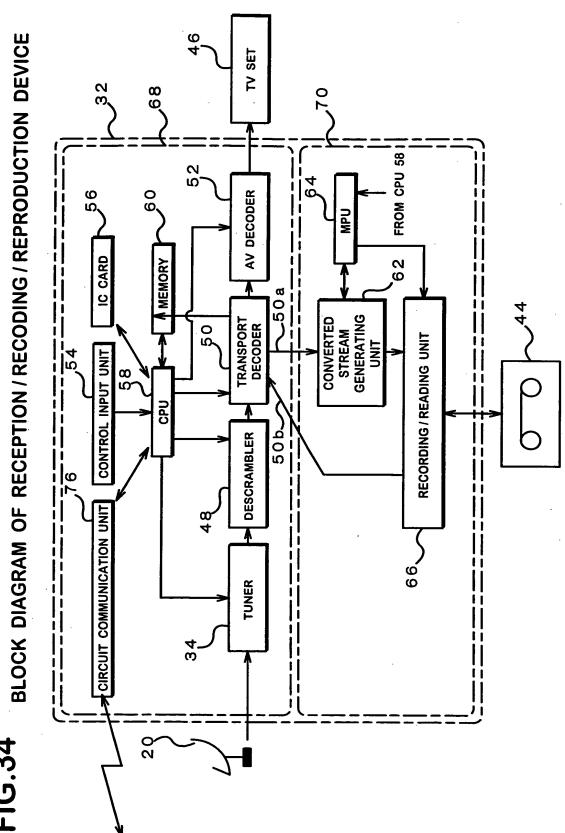


FIG.35

DETAILS OF AV DECODER 52

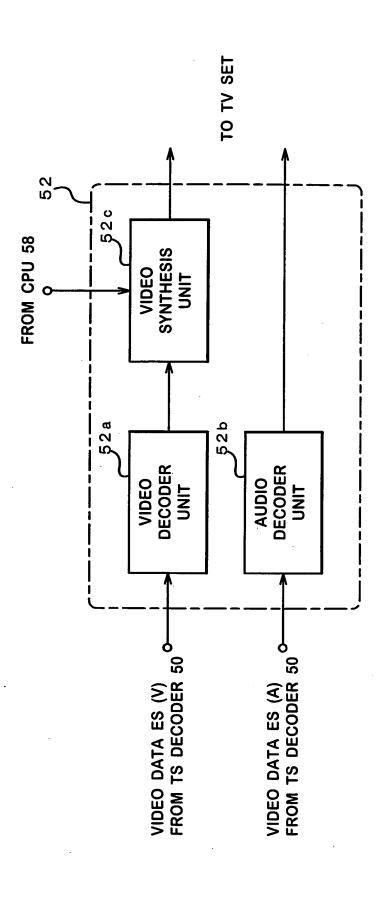
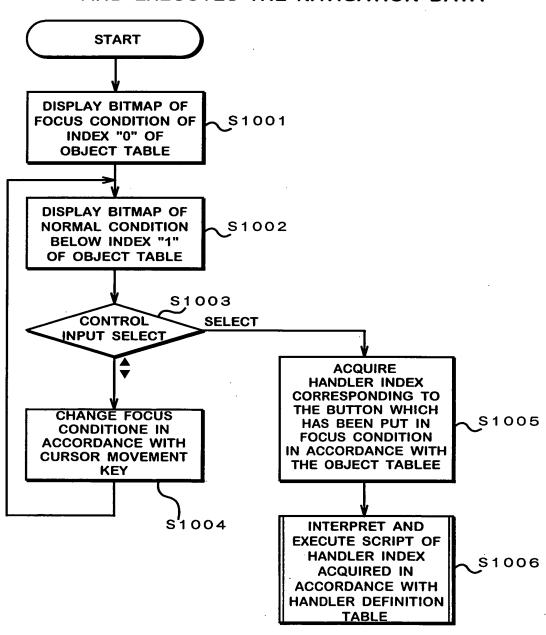
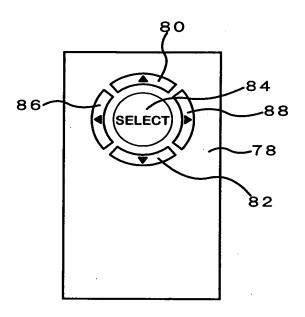


FIG.36 RECEPTION MODE **START ACQUIRE PAY BY** S11 SETTING PID=0 IN TS DECODER S12 USE PAT TO **ASCERTAIN WHE-**THER THE DESIRED YES SERVICE IS ON THE TS THAT IS **S18** RECOGNIZE PID OF CURRENTLY BEING PMT BY USING PAT **RECEIVED** NO S 1 3 ACQUIRE PMT BY S,19 **RECOGNIZE PID OF** SETTING PID OF PMT IN TS DECODER **NIT BY USING PAT** S 1 4 **DOES** NO THE DESIRED SERVICE **ACQUIRE NIT BY** INCLUDE AN NVT? SETTINGPID OF NIT S20 IN TS DECODER YES **`**S191 USE THE PMT TO S15 RECOGNIZE THE PID OF RECOGNIZE THE PID THE ENTRY CONTENT S,192 OF THE DESIRED RECOGNIZE TS OF OF THE DESIRED SERVICE AND THE DESIRED SERVICE. SERVICE AND THE PMT OF THE ECM **USING NIT** PID OF THE ECM S16 SET THE KEY SET THE KEY OBTAINED S193 USING THE ECM IN **OBTAINED FROM** CHANGE OVER THE ECM IN **DESCRAMBLER 48 TUNER DESCRAMBLER 48** S17 SET THE PID OF THE S21 ACQUIRE ES BY **ENTRY CONTENT IN** ACQUIRE PAT BY SETTING THE PID THE TS DECODER. SETTING PID=0 OF THE DESIRED S194 **OUTPUT VIDEO/AUDIO** IN TS DECODER SERVICE IN THE TO THE AV DECODER, TS DECODER AND STORE THE NAVI-**GATION DATA IN MEMORY 60** INTERPRET AND S,195 **EXECUTE THE** CONTENT OF THE **NAVIGATION DATA**

FLOW CHART OF PROGRAM THAT INTERPRETS AND EXECUTES THE NAVIGATION DATA



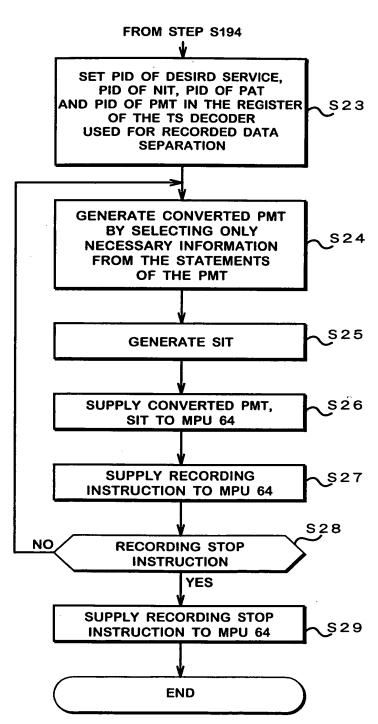
EXTERNAL APPEARANCE REMOTE CONTROLLER



MODE	RECEPTION	RECEPTION	REPRODUCTION	
RESULT	0	0	×	
TELEPHONE NUMBER	06-123-XXXX	1998/8/10 03-9876-XXXX	052-111-XXXX	
DATE AND TIME	1998/8/1	1998/8/10	1998/8/25	
	1	2	က	

ONLINE LOG

RECORDING MODE



CONVERTED PMT(PID=0×0011)

PACKET ID CORRESPONDENCE

	PID OF ES	
VIDEO	0×0096	ES (V) 11
VIDEO	0×0097	ES (V) 12
AUDIO	0×0098	ES (A) 11
AODIO	0×0099	ES (A) 12
NAVIGATION	0×0092	NVT1
DATA	0×0093	NVT2

ENTRY CONTENT

VIDEO	AUDIO	NAVIGATION DATA
0×0096	0×0098	0×0092

ES (V) 11 ES (A) 11 NVT1

CONVERTED PAT (PID=0×000)

SERVICE	PID OF CONVERTED PMT
SV11	0×0011

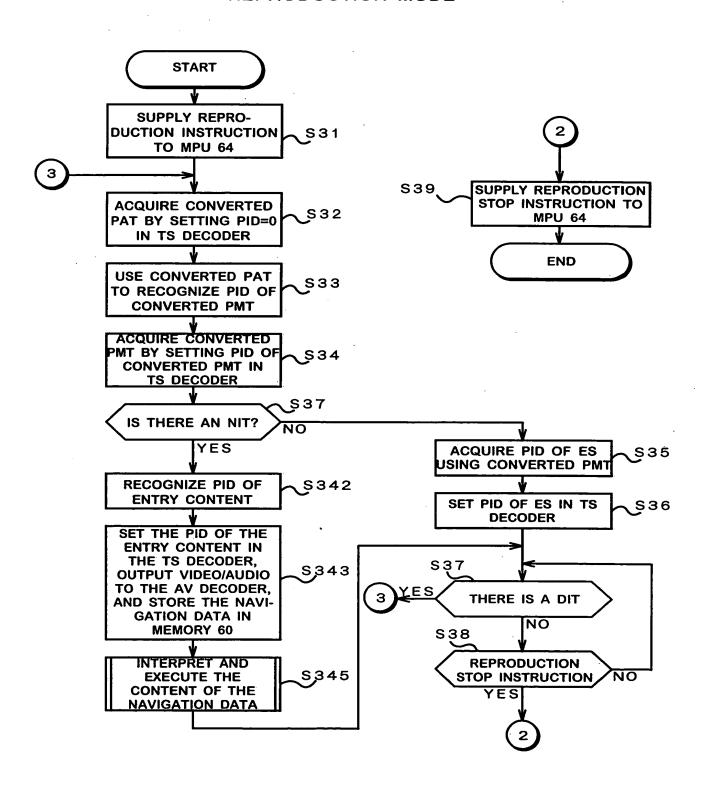
PID OF SI	Т
0×0018	

CONVERTED STREAM RECORDED ON RECORDING MEDIUM

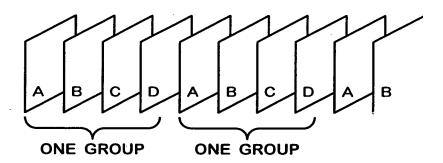
SIT	ONVERTED PI	NVT2	ES(V)11	ES(V)12	ES(V)11	ES(V)12	ES(A)11	ES(A)12	SIT	CONVERTED PAT	CONVERTED PMT	NVT1	NVT2	
-----	-------------	------	---------	---------	---------	---------	---------	---------	-----	---------------	---------------	------	------	--

FIG.44

REPRODUCTION MODE



ES OF STATIONARY IMAGE



NAVIGATION DATA NVT1

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INDEX	TYPE	×	>	HANDLER	CONDITION	CONDITION
0	BUTTON 500 200	500	200	0	0	1
1	BUTTON	200	400	1	2	3
2	BUTTON 500 600	009	009	2	4	9

HIPER LINK TABLE

INDEX	VIDEO	AUDIO	NAVIGATION DATA
0	0×0096	8600×0 9600×0	0×0092
1	0×0097	0×00970×0099	0×0093

HANDLER DEFINITION TABLE

INDEX	INDEX INSTRUCTION (SCRIPT)	
	if MODE=REPRODUCTION then get_record_time Tr	
0	get_current_time Tc if Tc_Tr<10800 then send_string(index 0, index 2)	ğ
	if MODE=RECEPTION OR RECORDING then send_string(index O, index 2)	
	If MODE=REPRODUCTION then get_record_time Tr	_
~	get_current_time Tc if Tc_Tr<10800 then send_string(index 1, index 2)	_&_
	if MODE=RECEPTION OR RECORDING then send_string(index 1, index 2)	_

BITMAP TABLE

_						
DATA (BITMAP DATA)	ORDER FROM OSAKA CENTER	ORDER FROM OSAKA CENTER	ORDER FROM TOKYO CENTER	ORDER FROM TOKYO CENTER	GO TO CLOTHING SHOP	MGO TO CLOTHING SHOP
INDEX	0	1	2	3	4	5

CHARACTER SEQUENCE TABLE

INDEX	CHARACTER SEQUENCE
0	XXXX-89E9-90
1	03-1234-XXXX
2	PRODUCT CODE:A-395

goto_contents (index 1)

NAVIGATION DATA NVT2

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•		i
i		

INDEX	TYPE	×	>	HANDLER	NORMAL CONDITION	FOCUS CONDITION
0	BUTTON 500 200	200	200	0	0	1
1	BUTTON 500 400	500	400	1	2	3
2	BUTTON 500 600	500	009	2	4	9

HPER LINK TABLE

8600×0	6600X01600X0	0×0097	1
0×0092	8600x09600x0	0×0096	0
NAVIGATION DATA	AUDIO	VIDEO	INDEX

HANDLER DEFINITION TABLE

INDEX	INDEX INSTRUCTION (SCRIPT)
0	if MODE=REPRODUCTION then get_record_time Tr get_current_time Tc if Tc_Tr<10800 then send_string(index 0, index 2)
	end It MODE=RECEPTION OR RECORDING then send_string(index 0, index 2)
	If MODE=REPRODUCTION then get_record_time Tr
-	If Tc_Tr<10800 then send_string(index 1, index 2)
	If MODE=RECEPTION OR RECORDING then send_string(index 1, index 2)
2	goto_contents (indexO)

BITMAP TABLE INDEX

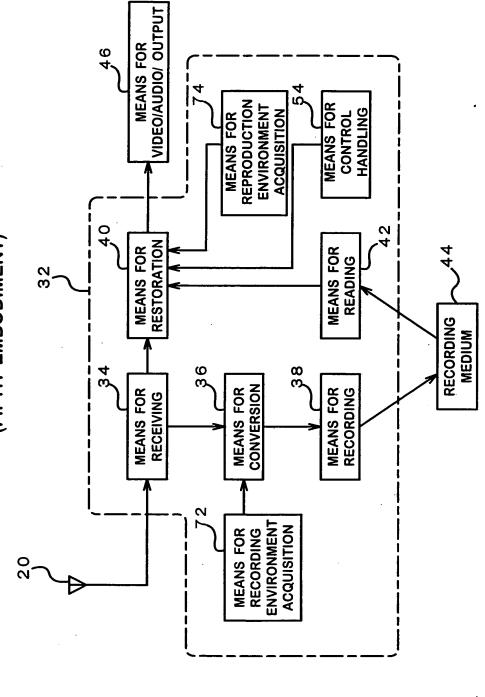
INDEX	DATA (BITMAP DATA)
0	ORDER FROM OSAKA CENTER
1	MORDER FROM OSAKA CENTER
2	ORDER FROM TOKYO CENTER
3	MORDER FROM TOKYO CENTER
4	GO TO DAILY NECESSITIES SHOP
5	GO TO DAILY NECESSITIES SHOP

CHARACTER SEQUENCE TABLE

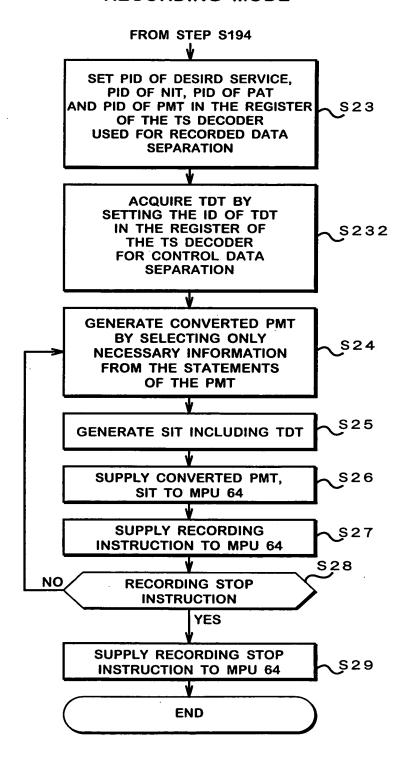
INDEX	CHARACTER SEQUENCE
0	XXXX-8989-90
1	03-1234-XXXX
2	PRODUCT CODE:B-133

FIG.48

OVERALL LAYOUT DIAGRAM OF RECEPTION/RECORDING/REPRODUCTION DEVICE (FIFTH EMBODIMENT)



RECORDING MODE



SCRIPT OF HANDLER DEFFINTION TABLE

IF CONDITION A
(RECORDING DATE AND TIME,
REPRODUCTION DATE AND TIME)
then go to content (index O)
else go to content (index 1)
endif

NAVIGATION DATA NVT1

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FOCUS	1	3	2
NORMAL CONDITION	0	2	4
HANDLER	0	1	2
\	200	400	600
×	200	200	200
INDEX TYPE	O BUTTON 500 200	BUTTON 500 400	виттом 500 600
INDEX	0	1	2

IIPER LINK TABLE

INDEX	VIDEO	AUDIO	NAVIGATION DATA
0	0×0096	8600×0 9600×0	0×0092
1	0×0097	0×00970×0099	0×0093

HANDLER DEFINITION TABLE

BITMAP TABLE INDEX

INDEX	DATA (BITMAP DATA)
O,	ORDER FROM OSAKA CENTER
1	ORDER FROM OSAKA CENTER
2	ORDER FROM TOKYO CENTER
3	ORDER FROM TOKYO CENTER
4	GO TO CLOTHING SHOP
2	MGO TO CLOTHING SHOP

EXECUTION CONDITION TABLE

TIME					10800 MINITES
TIME LIMIT				23:59 ON 31ST AUGUST, 1998	
EXECUTUON ALLOWED	ALLOWED	DENIED	CONFIRMATION	CONDITIONAL	CONDITIONAL
INDEX	0	-	2	က	4

CHARACTER SEQUENCE TABLE

1 0 1 2	CHARACTER SEQUENCE	XXXX-89E9-90	03-1234-XXXX	PRODUCT CODE:A-395
	INDEX	0	1	2

NAVIGATION DATA NVT2

OBJECT TABLE

= L		<u> </u>	
FOCUS CONDITION	1	က	5
NORMAL CONDITION	0	2	4
HANDLER	0	1	2
\	200	400	00900
×	200	N 500 400	N 500
TYPE	BUTTON 500 200	BUTTON	BUTTON
NDEX	0	1	2

IIPER LINK TABLE

	_		
NAVIGATION DATA	0×0092	0×0097 0×0099	
AUDIO	8600x09600x0	6600×0	
VIDEO	9600×0	0×0097	
INDEX	0	1	

HANDLER DEFINITION TABLE

INDEX	INSTRUCTION (SCRIPT)	CON- DITION
0		က
	send_string(index O, index 2)	
-		က
	send_string(index 1, index 2)	
2	goto_contents(index O)	0

BITMAP TABLE INDEX

٦					I _	
DATA (BITMAP DATA)	ORDER FROM OSAKA CENTER	MORDER FROM OSAKA CENTER	ORDER FROM TOKYO CENTER	MORDER FROM TOKYO CENTER	GO TO DAILY NECESSITIES SHOP	GO TO DAILY NECESSITIES SHOP
INDEX	0	1	2	3	4	2

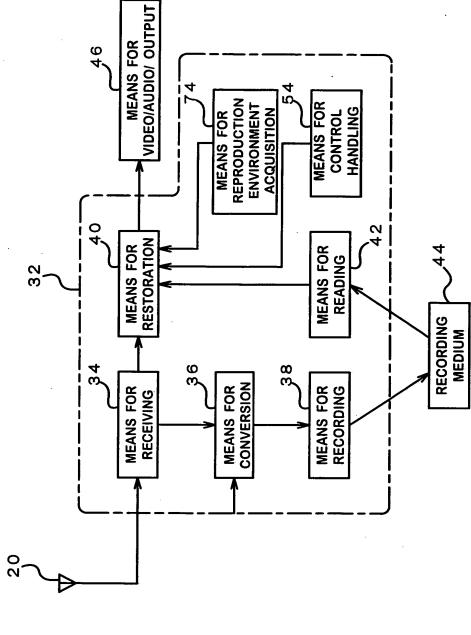
EXECUTION CONDITION TABLE

10800 MINUTES		CONDITIONAL	4
	23:59 ON 31ST AUGUST, 1998	CONDITIONAL	က
		CONFIRMATION	2
		DENIED	1
		ALLOWED	0
TIME	TIME LIMIT	EXECUTUON ALLOWED	INDEX

SEQUENCE TABLE	CHARACTER SEQUENCE	06-6368-XXXX	03-1234-XXXX	PRODUCT CODE:B-133
CHARACTER	INDEX	0	1	2

FIG.53





NAVIGATION DATA NVT1 (HTML VERSION)

HTML FILE

```
<html>
 <head>
  <script>
   function shopping_osaka() {//SCRIPT FOR ORDERING FROM OSAKA CENTER
     if (MODE == REPRODUCTION)
         Tr = get_record_time():
         Tc = get_current_time();
if (Tc - Tr < 10800) {
                                                                                        210
            send_string("06-6368-XXXX, "PRODUCT CODE":A-395);
      } e|se if (MODE == RECEPTION || MODE == RECORDING) {
        send_string ("06-6368-XXXX, "PRODUCT CODE": A-395);
   function shopping_tokyo() {// SCRIPT FOR ORDERING FROM TOKYO CENTER
     if (MODE == REPRODUCTION) {
         Tr = get_record_time();
         Tc = get_current_time();
if (Tc - Tr < 10800) {
                                                                                         220
            send_string("03-1234-XXXX, "PRODUCT CODE":A-395);
      } else if (MODE == RECEPTION || MODE == RECORDING) {
        send_string ("03-1234-XXXX, "PRODUCT CODE": A-395);
   function goto_clothing_store() {//SCRIPT FOR TRANSFERRING TO CLOTHING SHOP goto_contents("video:0x0097; audio:0x0099; navdata:0x0093");
                                                                                         230
  </script>
 </head>
 <body>
 200
 </body>
</html>
```

BITMAP FILE

bitmap	ORDER FROM	bitmap	ORDER FROM	bitmap	GO TO
0	OSAKA CENTER	2	TOKYO CENTER	4	CLOTHING SHOP
bitmap 1	ORDER FROM OSAKA CENTER	bitmap 3	ORDER FROM / TOKYO CENTER	bitmap 5	GO TO CLOTHING SHOP

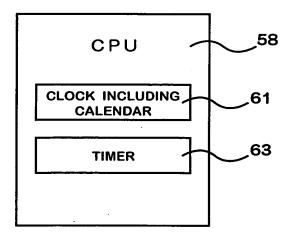
NAVIGATION DATA NVT2 (HTML VERSION)

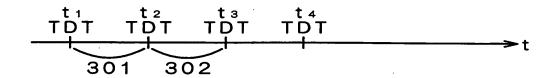
HTML FILE

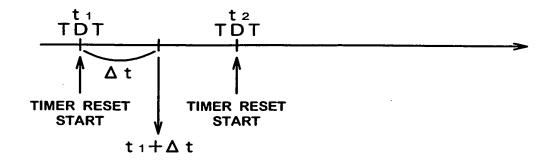
```
<html>
 <head>
  <script>
   function shopping_osaka() {//SCRIPT FOR ORDERING FROM OSAKA CENTER
    if (MODE == REPRODUCTION)
                                   -{
         Ir = get_record_time();
         Tc = get_current_time();
if (Tc - Tr < 10800) {
            send_string("06-6368-XXXX, "PRODUCT CODE":A-395);
     } else if (MODE == RECEPTION || MODE == RECORDING) {
        send_string ("06-6368-XXXX, "PRODUCT CODE":A-395);
   function shopping_tokyo() {// SCRIPT FOR ORDERING FROM TOKYO CENTER
    if (MODE == REPRODUCTION) {
         Tr = get_record_time():
         Tc = get_current_time();
if (Tc - Tr < 10800) {
            send_string("03-1234-XXXX, "PRODUCT CODE":A-395);
     } else if (MODE == RECEPTION || MODE == RECORDING) {
        send_string ("03-1234-XXXX, "PRODUCT CODE":A-395);
   function goto_clothing_store() [//SCRIPT FOR TRANSFERRING TO CLOTHING SHOP goto_contents("video:0x0097; audio:0x0098; navdata:0x0092");
  </script>
 </head>
<body>
 </body>
</html>
```

BITMAP FILE

bitmap	ORDER FROM	bitmap	ORDER FROM	bitmap	GO TO
0	OSAKA CENTER	2	TOKYO CENTER	4	CLOTHING SHOP
bitmap	ORDER FROM OSAKA CENTER	bitmap	ORDER FROM /	bitmap	GO TO
1		3	TOKYO CENTER	5	CLOTHING SHOP







BLOCK DIAGRAM OF RECEPTION/RECODING/REPRODUCTION DEVICE FIG.59

